

METHOD OF FORMING MATERIAL USING ATOMIC LAYER DEPOSITION
AND METHOD OF FORMING CAPACITOR
OF SEMICONDUCTOR DEVICE USING THE SAME

Cross-Reference of Related Applications

[0001] This application is a Continuation-in-part of and claims priority under 35 U.S.C. § 120 to U.S. Patent Application Serial No. 10/047,706 entitled "SEMICONDUCTOR CAPACITORS HAVING TANTALUM OXIDE LAYERS AND METHODS FOR MANUFACTURING THE SAME", which was filed on January 15, 2002, ^{NOW U.S. Pat. 6,734,480} the contents of which are herein incorporated by reference in its entirety. This application also claims priority under 35 U.S.C. § 119 from Korean Patent Application Nos. 2001-3165, filed January 19, 2001, and 2002-42217, filed July 18, 2002, the contents of which are also herein incorporated by reference in their entirety.

BACKGROUND OF THE INVENTION

Field of the Invention

[0002] The present invention relates to a method of manufacturing semiconductor devices, and more particularly, to a method of forming a material layer during the manufacture of semiconductor devices using the technique of atomic layer deposition (ALD) and a method of forming the dielectric layer of a capacitor of a semiconductor device using ALD.

Description of the Related Art

[0003] The decrease in cell capacitance resulting from a reduction in available memory cell area makes it difficult to increase the integration density of semiconductor